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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,559	02/19/2002	Carl B. Freidhoff	2662-140	1467
6449	7590	03/17/2005	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			HA, NATHAN W	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/076,559	FREIDHOFF, CARL B.
	Examiner	Art Unit
	Nathan W. Ha	2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 22 December 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-20 and 22-26 is/are allowed.

6) Claim(s) 27 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Montague et al., US 5,798,283, previously cited, hereinafter, Montague.

In regard to claim 27, Montague discloses a method of fabricating a micro-electromechanical system (MEMS) device (e.g. Figures 2-10) comprising the steps of: forming a control circuit with an actuating element (24) on a substrate 14 (e.g. column 6, lines 8-13);

forming a moving member 26 above the actuating element, for example, see fig. 4 and col.6, lines 13-15, by forming a first sacrificial layer (30) over the actuating element, depositing a conductive material (28) such that the material extends from the circuit to cover the first sacrificial layer, and removing portions of the first sacrificial layer but not between the moving member and the substrate (e.g. column 5, lines 45-46, and fig.11);

encapsulating the moving member on all sides with a second sacrificial layer (32);

coating the second sacrificial layer with a material (34) that forms a hermetic seal with the substrate;

and removing the first and second sacrificial layers (e.g. Figure 12).

Allowable Subject Matter

3. Claims 1-20 and 22-26 are allowed.
4. The following is an examiner's statement of reasons for allowance:

After carefully reviewed the Applicant's arguments and newly amended claims in paper filed 6/1/04, and updated prior art of record, the Examiner finds that the Applicant's arguments and newly added limitations are reasonable and strongly persuasive. Therefore, they place the above-indicated claims in condition for allowance. The primary reason for the indication of the allowability of the above claims is the inclusion therein, in combination as currently claimed, of the limitation of the use of the sacrificial layer with a first film formed of a material that establishes an hermetic seal with the substrate, wherein the first film has tapered sides. This limitation is found in the above claims and is neither disclosed nor taught by the prior art of record, alone or in combination.

Response to Arguments

5. Applicant's arguments filed 12/22/04 have been fully considered but they are not persuasive. For instance, Applicant contends that the device as cited does not teach or show a MEMS device that is formed on the substrate. It should be noted that the

substrate 14 as shown in figs. 2-3 includes a non-planar surface, which means the surface of the substrate has been modified to include a recess. Therefore, the recess as shown in figs. 2 and 3 is part of the surface of the substrate. Hence, the MEMS device is indeed formed on the surface in the recess area of the substrate.

6. In response to applicant's argument that the references fail to show certain feature of applicant's invention, it is noted that the features upon which applicant relies (i.e., the device of cited art is formed different than the current claim since the cited device is before the circuitry) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Nathan Ha
March 9, 2005



HOAI PHAM
PRIMARY EXAMINER